

REMARKS

Claims 1-32 are pending in the application. The Office has rejected claims 1, 10-13, and 30 under 35 USC § 102(e) as being anticipated by Abdel-Mottaleb *et al.* (US Pat. No. 6,285,995). Claims 2-9 and 14-24 stand rejected under 35 USC § 103(a) as unpatentable over Abdel-Mottaleb *et al.* (US Pat. No. 6,285,995) in view of Guck (US Pat. No. 5,864,870). Claims 25-29 stand rejected under 35 USC § 103(a) as unpatentable over Abdel-Mottaleb *et al.* (US Pat. No. 6,285,995) in view of the publication "Case Based Reasoning Technology ..." by Lenz *et al.* Claim 31 is rejected under 35 USC § 103(a) as unpatentable over Jain *et al* and Lenz *et al.* (US Pat. No. 5,893,095) in view of Guck (US Pat. No. 5,864,870). Claim 32 is rejected under 35 USC § 103(a) as unpatentable over Cariño (US Pat. No. 6,067,542) in view of Abdel-Mottaleb *et al.* (US Pat. No. 6,285,995), Guck (US Pat. No. 5,864,870) and Lenz *et al.*

102 Rejection in view of Abdel-Mottaleb (Claims 1, 10-13, and 30)

Abdel-Mottaleb does not show or suggest storing "a plurality of exemplar cases" in a database system, as required by Applicant. Abdel-Mottaleb teaches an image retrieval system where individual images, stored in a database, are compared to a "query image" to identify a candidate image having the largest similarity to the query image. These images are not at all akin to the "exemplar cases" in a case-based reasoning (CBR) system that is claimed by Applicant.

A person of ordinary skill in the art of case-based reasoning would understand that a fundamental tenet of case-based reasoning is that each case must include a description of a problem and a solution for that same problem. Applicant states this tenet clearly in paragraph [0001] of the specification. With this in mind, it is clear that Abdel-Mottaleb simply does not show or suggest any facet of a CBR system, let alone exemplar cases like those claimed. Abdel-Mottaleb simply teaches how to compare a query image to other images stored in a database. There are no stored descriptions of problems, and there are no stored solutions to those problems. There are only images, and there is nothing that would lead a person of ordinary skill to believe that these images are or ever could be CBR type cases. It is clear, therefore, that the "exemplar cases" claimed by

Applicant are missing entirely from Abdel-Mottaleb, and thus these claims are allowable over this reference.

103 Rejections in View of Lenz and Others

The Office has used improper hindsight reconstruction in forming the three 103 rejections that rely on Lenz. Of the references cited by the Office in the 103 rejections, only Lenz shows a database system and any sort of case-based reasoning (CBR), both of which are part of Applicant's invention. None of the other references makes any mention of CBR or gives any indication whatsoever that it is even aware of case-based reasoning.

What's more, Lenz teaches directly away from Applicant's solution. Lenz, which was published in 1998, clearly states that there are no database solutions available for doing case-based retrieval (*see* Lenz, page 340, lines 4-6). Lenz further states that much research is needed before a successful commercialized CBR database product could come about (*see* Lenz, page 340, lines 7-9). Lenz is very clear that the primary area of research should be on "data access methods." Lenz states "the existing access methods must then gradually evolve to access methods optimized for doing case-based retrieval." (Lenz, page 340, lines 25-26.) In describing the most common access method used by databases, Lenz states "the prominent access method ... is the kd-tree" and further states that "it is not optimal." (Lenz '98: p 338, lns 1-8.) Lenz points out that the following data access methods maybe of interest for further research: hB-Tree, TV-Tree, and LSD-Tree.

Of the four patent references the Office has combined with Lenz, three (Jain, Cariño, and Guck) where filed prior to 1998, the year Lenz was published. The fourth (Abdel-Mottaleb) was filed in 1998 and may have been filed prior to Lenz. In 1998, Lenz believed that there were no known solutions to the database problems he described, and he further believed that much research was still needed. Either Lenz was mistaken in this belief, or else three (and possibly all) of the remaining references do not solve the problems described by Lenz. In either case, the Office's contention that one of ordinary skill in the art would have used these references to solve the problems of Lenz is inaccurate. There simply would have been no motivation whatsoever, apart from a reading of Applicant's disclosure, to combine any of these references with Lenz.

Furthermore, none of the references that the Office has combined with Lenz shows or suggests a solution to any of the problems detailed by Lenz. In fact, none of the references are even aware of the problems detailed by Lenz, nor do they address any of the areas of research described by Lenz. Jain describes "an extensible system for retrieval of stored visual objects based on similarity of content to a target visual object." Guck describes a method "for determining the type and content of incoming files, transforming such files into objects, and storing them in an object database for later retrieval" Cariño describes a "query optimizer," and Abdel-Mottaleb describes an "image retrieval system." The only possible motivation that the office could have to combine these references is improper hindsight reconstruction using Applicant's claims as a guide. A person of ordinary skill in the art would not look to these references to solve the problem articulated by Lenz, because the solutions simply are not there. All three of the 103 rejection references involving Lenz are therefore improper, and the rejected claims are allowable.

103 Rejection - Abdel-Mottaleb, Guck, and Lenz (claims 25-29)

The combination of Abdel-Mottaleb, Guck, and Lenz is the result of improper hindsight reconstruction, for at least the same reasons as those given above.

In addition, not one of Abdel-Mottaleb, Guck, and Lenz shows or suggests "comparing a target case with a plurality of exemplar cases within a database," as required by Applicant. As pointed out above, the "exemplar cases" are a fundamental tenet of case-based reasoning, and each case is required to have a description of a problem and a solution for the problem. Abdel-Mottaleb and Guck simply do not show or suggest case-based reasoning or any features of this approach, and Lenz fails to show comparing a target case with a plurality of exemplar cases within a database. Therefore, these references, whether considered separately or together, do not show or suggest all the features of Applicant's claims.

103 Rejection In View of Jain, Guck, and Lenz (claim 31)

The combination of Jain, Guck, and Lenz is also the result of improper hindsight reconstruction. The references have little in common and do not solve the problems of

case-based reasoning. There simply would have been no motivation whatsoever, other than an improper hindsight reconstruction, for a person of ordinary skill in the art to combine these three references.

Furthermore, not one of Jain, Guck, and Lenz shows or suggests "formulating and executing, within the database, a comparison between the target cases and the exemplar cases," as required by Applicant. Jain teaches a "system for retrieval of stored visual objects." (Col. 1, line 24.) As previously stated, a fundamental tenet of case-based reasoning is that each case must include a description of a problem and a solution for the problem. Jain makes no reference to "exemplar cases" or any object meeting the requirements to be an exemplar case. Jain simply does not show or suggest exemplar cases. As discussed earlier, neither Guck or Lenz describes these elements of Applicants' claim. Therefore, Applicant's claim is allowable over these references.

103 Rejection In View of Cariño, Abdel-Mottaleb, Guck, and Lenz (claim 32)

Applicant finds it increasing difficult to understand how the Office can continue to add reference after reference and maintain that there is any motivation to combine the references other than improper hindsight reconstruction. Applicant's justification for this position, as given earlier in this reply, holds here as well. The addition of Cariño does not offer any additional support for combining these references. It simply follows the guide offered by Applicant's claim 32, which added "a massively parallel processing system" as an element. Cariño does not solve nor address any of the problems described by Lenz or the other two references. Cariño's only relevance is that it deals with massively parallel processing systems. As with the other references, Cariño neither shows nor suggests any solution to the problems stated in Lenz and described earlier by Applicant. There is simply no reason, outside of hindsight reconstruction, for a person of ordinary skill in the art to combine these four references.

Additionally, none of the four references show or suggest "a comparison object within the database for comparing the target case with the plurality of exemplar cases" as required by Applicant. A fundamental tenet for case-based reasoning systems is that each case must include a description of a problem and a solution for the problem. As stated earlier, Abdel-Mottaleb and Guck do not show or suggest exemplar cases. Cariño also

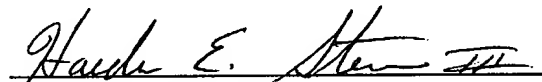
does not show or suggest exemplar cases. While Lenz does show cases, none of the references, including Lenz, show or suggest that a target case is compared with a plurality of exemplar cases inside a database. Therefore, together or separate, these references do not show or suggest all the elements of Applicant's claim.

CONCLUSION

The references cited by the Office, whether taken separately or together, do not show or suggest all of the elements of Applicant's claims. Therefore, all claims are allowable over the art of record. Applicant asks the Office to reconsider this application and allow all claims. Please charge any fees that might be due, excluding the issue fee, to deposit account 50-1673.

Respectfully,

Date: 9/1/04


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